

RepliGut[®] Custom Services

RECREATING THE HUMAN INTESTINAL EPITHELIUM

APPLICATIONS

Explore effects of drugs on proliferative and differentiated cells in a single system.

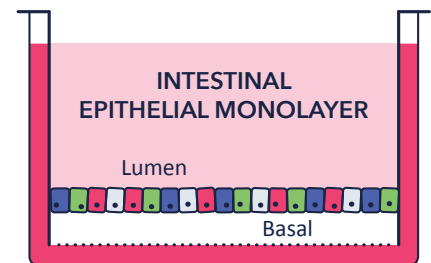
Model inflammation for discovery of anti-inflammatory targets.

Study functional differences between small and large intestinal cells.

RepliGut[®] Systems consist of stem cells and a support matrix with media that drives expansion and differentiation of stem cells into all key cell types in the gut epithelium.

RepliGut[®] Systems represent the next generation of *in vitro* testing for discovering new targets, optimizing new leads, and uncovering toxicity earlier. We provide accurate biological screening based on real human intestinal tissue with a standardized workflow.

Altis will work with you to design the best project for your needs that will deliver scientifically sound results.



Facility & Equipment

- ✓ 6,000 ft² BSL-2 space
- ✓ 7-day/week operations
- ✓ 24h equipment monitoring system



BioTek Synergy H1
Microplate Reader



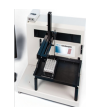
2 WPI EVOM3
TEER meters



Bio-Rad 96w T100
Thermal cycler



Leica DMI8 Inverted
Fluorescent Microscope



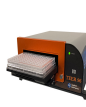
WPI Automated TEER
system (in evaluation)



Invitrogen Qubit
4 Fluorometer



Molecular Devices
ImageXpress Nano



Applied Biophysics ECIS
Automated TEER96
(in evaluation)



Agilent 4200
TapeStation



2 WPI EVOM2 TEER
meters

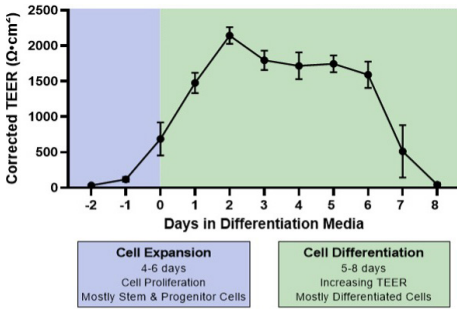


Applied Biosystems
QuantStudio 3 RT-PCR
System

Over 50% of laboratory operations staff are PhD- or Master's-level scientists.

Intestinal Barrier Function

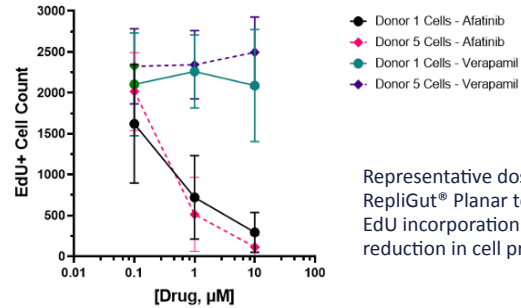
Integrity of the intestinal epithelium is crucial for the normal functioning of the lower GI tract. RepliGut® maintains barrier integrity with high TEER values. Compounds can be assessed for the potential to disrupt barrier function.



Representative TEER kinetics during expansion and differentiation phases. TEER increases during differentiation and reaches a plateau before normal turnover occurs.

GI Toxicity

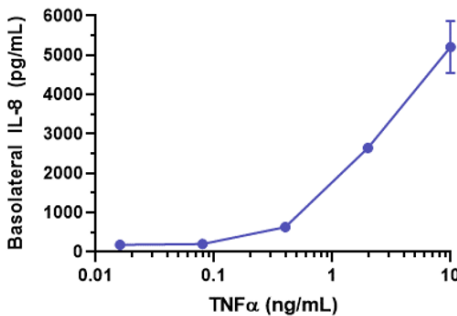
GI toxicities are among the most common adverse events during Phase 1 clinical trials. RepliGut® Model recreates intestinal epithelium and can be used to screen compounds for drug-induced GI toxicity early in the drug development process.



Representative dose-response of RepliGut® Planar to Afatinib using EdU incorporation to show reduction in cell proliferation.

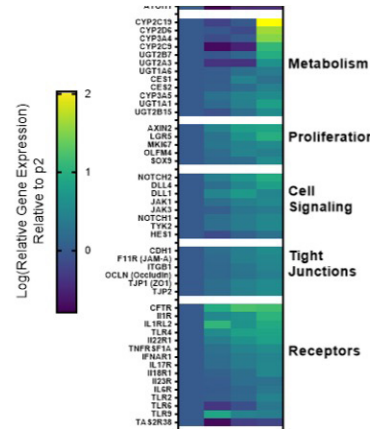
Inflammatory Response

Inflammation of the GI tract is the main hallmark of Inflammatory Bowel Disease. Release of inflammatory mediators following compound dosing can be quantified in both basal and luminal compartments.



Dose-response analysis of IL-8 release following treatment of RepliGut® Planar culture with TNFα.

Gene and Protein Expression



Tissue RNA extracts can be used in RT-PCR, BioMark, and NexGen Sequencing to gain a detailed mechanistic understanding of epithelium responses.

Representative heat map of genes using BioMark RT-PCR analysis.

DIVERSE BIOBANK

An ethically sourced biobank consisting of multiple intestinal regions from multiple donors allows for both cross-region and cross-donor studies.

Multiple Regions and Donors Available

Compare small and large intestine or determine inter-individual variances

Small Intestine

- Duodenum
- Jejunum



Colon

- Ascending Colon
- Transverse Colon
- Descending Colon



SCAN HERE TO GET IN TOUCH WITH OUR EXPERTS

Disclaimer: For research use only, not for diagnostic purposes. All trademarks belong to Altis Biosystems or its affiliates or respective 3rd parties. The information herein is believed to be accurate and corresponds to the latest understanding of scientific and technical knowledge. No warranty is made, expressed or implied, concerning results obtained from the use of this information. User must make his/her own determination that the information and recommendations are suitable for intended purpose. This Data Sheet was issued for individual consumption and further dissemination, or publication of this data is prohibited.